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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,726	06/26/2001	Juha M. Heikkila	872.0043.USU	1368
29683	7590	07/28/2005	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			NGUYEN, DUNG X	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/891,726

Applicant(s)

HEIKKILA, JUHA M.

Examiner

Dung X. Nguyen

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 - 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 3 and 5 - 8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/08/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's arguments filed on 09 February 2005 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new found reference(s).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

3. **Claims 1, 2, 5, 6, and 8 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Brerster (US patent application publication # 2002/0085657 A1), and further in view of Harrison (US patent # 6,781,419 B2).

Regarding claim 1, Brerster discloses (figure 8):

- An input node for receiving the clock signal (14); and
- An output node for outputting a process clock signal (16) having a first edge that is synchronized to an edge of the clock signal (page 1, paragraph # 0014).

Brerster differs from the instant claimed invention that it does not show the step of a second edge that is varied so as to provide a predetermined processed clock signal duty cycle.

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However, Harrison discloses (figure 1) that a second edge that is varied so as to provide a predetermined processed clock signal duty cycle (column 2, lines 15 – 19 and column 3, lines 24 – 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Broerstler and Harrison as providing the requirements of the instant claimed invention for latching the signals in symmetrical (column 1, lines 36 - 40 of Harrison).

Regarding claim 2, as followed by the limitations analyzed in claim 1, Harrison further discloses the predetermined duty cycle is a nominally 50-50 duty cycle (column 2, lines 15 – 19 and column 1, lines 58 – 63) for latching the signals in symmetrical (column 1, lines 36 - 40 of Harrison).

Regarding claim 5, the limitations are analyzed in the same manner set forth as claim 1.

Regarding claim 6, as followed by the limitations analyzed in claim 5, the limitations are analyzed in the same manner set forth as claim 2.

Regarding claim 8, as followed by the limitations analyzed in claim 5, Boerstler further discloses wherein the first edge of the processed clock signal is a rising edge that is synchronize to a rising edge of the clock signal (page 1, paragraph # 0014) for defining edges of multiphase clock signals being most closely aligned with an edge of the data stream (page 1, second column, lines 61 – 65).

4. **Claims 3 and 7 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Brerstler (US paten application publication # 2002/0085657 A1), Harrison (US patent # 6,781,419 B2), and further in view of James M. Clark (US patent # 3,629,712).

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Regarding claim 3, as followed by the limitations analyzed in claim 1, Broerstler and Harrison differ from the instant claimed invention that they do not disclose the step of wherein the output node being coupled to a baseband circuitry of a wireless communication terminal.

However, James M. Clark discloses (figure1) that wherein the output node being coupled to a baseband circuitry of a wireless communication terminal (column 2, lines 60 - 62) inherently of a wireless communication terminal (because the PCM baseband signal is applied from source (3) to sharper (4) and sharper (4) is a device of wireless communication terminal).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Broerstler's teaching, Harrison's teaching, and James M. Clark's teaching as providing the requirements of the instant claimed invention for controlling the duty cycle of an output clock signal independently of the duty of an input clock signal in a wireless communication terminal.

Regarding claim 7, as followed by the limitations analyzed in claim 5, the limitations are analyzed in the same manner set forth as claim 3.

#### ***Allowable Subject Matter***

4. **Claim 4 is objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 8:00 AM to 17:00 PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Vanderpuye, Kenneth N. can be reached on (571) 272-3078. The fax phone numbers for this group is (571) 273-3021.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

DXN

July 22, 2005



**KENNETH VANDERPUYE**  
**PRIMARY EXAMINER**